



# ISD News and Views

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## IBM Library Reader

ISD is announcing the availability of another Value Added Service, IBM Library Reader. This service is free to all State agencies. IBM Library Reader is part of a family of IBM licensed programs and products that allow you to view online manuals. IBM Library Reader is available for State of Montana agencies, either through the campus network backbone, or on agency networks if installed.

The IBM Library Reader product gives you quick and easy access to information in online manuals. In addition to reading your books you can quickly search for words or phrases even if they are not included in the table of contents or the index; you can move directly to a referenced topic, figure, or table and then back to your previous place in the book; you can retrace your path through a book; or you can go directly from a table of contents or index entry to a topic in the book.

ISD has offered several IBM Library Reader classes already. If you are interested in attending a class, please call Lois Lebahn at 444-3987 to be placed on a waiting list. When enough interest is received, more classes will be offered.

If you would like to gain access to IBM Library Reader on the ISD Services Ring, you need only login or attach to ISD's server ISDNOVS01 as GUEST. Then change to the READIBM subdirectory and type READIBM.BAT. For more information about using IBM Library Reader, please call Denny Knapp at 444-2072 or Irv Vavruska at 444-2858. They will send you more complete instructions on how to access the product and how to create personal configuration files.

## Telebyte Model 701 Pocket Videoverter

With presentation software such as Freelance Graphics one can create presentations and store them on a diskette for use on PC's which do

not need the parent software. A copy of the presentation module is stored with the slides on a disk. This makes it possible for a central group to create screen shows and distribute them to remote areas for presentation on portable PC's.

Two problems occur with the common application of this technique:

1. The typical portable PC used is gray-scale so color is lost even if the resolution is VGA.
2. The screen is so small, large groups cannot be accommodated.

Devices such as the Kodak Videoshow connect to the PC and are placed on an overhead projector to solve the latter problem, but color quality suffers. Also, the device itself is too big to pack around in the typical portable PC case.

The Telebyte Videoverter uses a standard television set to solve the color and group problems. The device itself is pocket size but it also has a power supply similar to those used on modems. Supposedly, a TV monitor can be found most places a presentation will be made so one need not be carried by the presenter.

The hookup procedure is fairly straight-forward, but is limited to 15 pin VGA output connectors on the PC. Some software must be copied to hard disk and a program executed which loads a TSR which provides a hot-key sequence to shift back and forth between the PC and the TV monitor. You also have to execute the PC's external monitor switching sequence.

The manual is only 20 pages and is generally clear and straight forward. Two types of cables are supplied to connect "AV" or "S-VHS" depending on what the TV accommodates. This is the only thing in the manual which is not well explained. The AV connectors are the old RCA phono plugs while the S-VHS resemble PC keyboard connectors. S-VHS is stated to be higher quality and to be preferred if the TV supports it. The manual says to "select the appropriate channel related to input type you have connected" but does not explain further. I used channel 3 for the AV connector and it worked.

The biggest drawback to the Videoverter is that TV resolution is not very good compared to

what we are becoming used to with PC monitors. The TV display reminds me of CGA's 320x200 resolution but with more colors. The Videoverter supports most modern VGA specifications, but the typical TV does not. This means that slides prepared for high resolution monitors will most likely have to be revised for TV use, especially text slides which should have less and larger text per slide.

--Gary Wulf

## *Term Contract Status*

### *Microcomputers*

Dell, DEC, and IBM have recently made several price reductions, product additions, and product changes. The updated price lists have been distributed via electronic mail. All new products on the lists have been approved, contingent upon vendor certification of compatibility. Agencies should be aware that ISD has not rigorously tested these products. We will work with you if there are compatibility problems that need to be resolved with the vendor.

If you have any questions about the latest prices or products, please call the vendor or Brett Boutin (444-0515). Term contract price lists will be distributed, upon request, through Zip-Mail. If you would like to be on the distribution list, please call Brett.

### *Microcomputer Maintenance*

The microcomputer maintenance term contract with IBM is available for agencies to utilize. A new form used to place equipment under maintenance has been developed and is now available for electronic distribution. Any equipment you want placed under this contract needs to go on the new form. Also, any requested additions or deletions must be placed on the form. When you have completed the form, send a purchase order with the form attached to:

IBM

100 N. Park Ave.  
Helena, MT 59601.



There have been some recent additions to the price list. The new list will be distributed electronically to those who request a copy. If you would like the new list, or a copy of the form, please contact Brett for assistance.

## ***Management Information Systems Services***

A Request For Proposals (RFP) has been released for a Management Information Systems (MIS) Services term contract. This term contract will provide additional MIS services to agencies. For example, term contract programmer/analysts could be utilized for a large programming project for which you have insufficient staff. This term contract also will make available a consultant to assist with administrative and staff support activities. If you are interested in this service and would like more information, please call Brett Boutin (444-0515).

## ***Virus Protection and Software Monitoring***

ISD is renewing a contract with McAfee Associates for the use of their virus protection software for the next two years. This contract is a corporate-wide license and covers all state agency PC's. Many vendors including McAfee also offer a LAN server version of their virus protection software to provide continuous protection at the server level. This software is typically licensed on a per server basis. Due to ISD budget constraints, our McAfee contract does NOT include the server product.

In discussions at the February Data Processing Managers Meeting, it was recommended that server protection be considered as a vital component of our overall virus protection strategy. Even though ISD doesn't have the budget to buy the server component for all agencies, there is benefit in everyone using the same software. Several agencies are already using SiteLock by Brightwork Development. Based on the favorable reports of a number of agencies who are already using SiteLock we recommend that any agency needing Novell server virus protection or software monitoring use SiteLock.

SiteLock is a NetWare Loadable Module (NLM) for Novell NetWare servers. It provides virus protection by verifying protected files be-

fore proceeding and preventing altered, unauthorized, or possibly infected software from running. SiteLock also helps enforce compliance with software license agreements by monitoring application usage on NetWare LAN's and limiting the number of simultaneous users of an application. When available software licenses are all used, the user is placed on a waiting list, and then notified when a software license becomes available. This greatly simplifies tracking software licenses. The reporting features built into SiteLock are extremely useful for LAN administrators. SiteLock can generate both reports and graphs on LAN usage and activity. By monitoring access and usage, SiteLock can let the LAN administrator know which applications are in demand. With SiteLock, LAN managers can determine what software runs on the network - users can't run programs from their local drives without approval. SiteLock is also Windows Compatible. SiteLock protects against software piracy by not allowing executable code to be copied from the server to diskette or a local hard drive. Any software copied in this manner is not executable.

Although ISD will not be supporting SiteLock, we are recommending that any agency with these needs consider purchasing SiteLock. The latest release of SiteLock is 3.3. If you have questions regarding our evaluation of SiteLock, please contact Irv Vavruska in End User Computing at 444-2858.

## ***Mainframe***

### ***Online Help for Online Systems***

The State of Montana has purchased two products from GT Software, Inc. called ASSIST/GT and ASSIST/VISION. With these products all online CICS and IDMS systems can now add help information to their online applications.

With ASSIST/GT you can attach help windows, help screens, or an entire user manual to each field or screen in your online application. Generation of the help text is independent of your application and can be completed by the end user or the development staff. With these products, you have the option of generating your help windows in CICS, or they can be

created in WordPerfect. User manuals must be created in WordPerfect.

Documents created in WordPerfect must be processed by the ASSIST/VISION software then loaded to the mainframe. WordPerfect's features such as Table of Contents, Index, Automatic Page Numbering, Bolding, etc., will be preserved by ASSIST/VISION and will be functional under CICS.

ASSIST/GT has additional capabilities that allow you to attach an online calculator to your screen, as well as a sticky cursor function that allows you to transfer information from a help window directly to your input field.

An additional benefit to be achieved with these products is that your User Manual, or any other documentation you have, can be assigned to and selected from a MENU without having to be attached to an online application. An example of this is an Agency Manual of Standards which can be assigned as a menu option for viewing by one or more agencies.

IDMS systems can benefit from these products as well. Our long term goal is for CICS to become the front end for all IDMS systems. The new SRS SEARCHS System is an IDMS application that runs under CICS. Currently the SEARCHS System has over 1000 help windows and help screens attached to their online system.

For questions on ASSIST/GT contact Glen Stroop at ext. 2910 in the Application Support Section. Any question or comments on ASSIST/VISION please contact either Pat Emineth at ext. 2921 or Sue Skuletich at ext. 1392 in the End User Computing Section.

### ***ISD Installs 3490 Cartridge Tape Drives***

ISD has just installed eight IBM 3490 cartridge tape drives. The cartridge tape drives offer many advantages over the 3420 reel-to-reel drives we have had for years. ISD plans to work with our users to convert all active tapes in our library to cartridges over the next several months. Our goal is to replace the majority of the 3420 tape drives with 3490 cartridge drives. We will retain the ability to process 3420 reel-

to-reel tapes, but we wish to minimize this processing.

The 3490 cartridge tape subsystem offers many advantages over the 3420 drives which our users will appreciate:

1. The tape cartridges themselves are much more reliable than the reel tapes. The tape media is completely enclosed within the cartridge protecting it from contamination. The number of reruns due to tape errors should be reduced by well over 95%.
2. A single cartridge will hold much more data than a reel of tape. Data is recorded on the cartridges in 18 tracks at 38,000 bytes per inch verses 9 tracks at 6250 bytes per inch on the 3420 tape reels. But the main reason for the increased capacity stems from the fact that the data on the cartridges is compacted. The compaction is performed by the 3490 hardware so there is no cost to you in CPU cycles spent to compress the data.

In one test we stored all the data from 2 and a half 3420 tape reels on a single cartridge. Another test involved a job (FDR) that was compressing data via software before writing it to tape. We modified the job to let the 3490 hardware do the data compression. The same amount of tape was used but the CPU time dropped from 92 seconds to 11 seconds since the software did not have to compress the data.

3. The 3490 tape drives are equipped with automated cartridge loaders. MVS can recognize when scratch cartridges are present in the loaders. It will automatically cause one of these cartridges to be loaded when a job requests a scratch tape. No action is required by a computer operator. This will improve the turnaround time for batch jobs since they will not have to wait for scratch tape mounts.
4. The 3490 cartridge drives are front-ended by a control unit that contains a large data buffer. Data can thus be transferred to and from mainframe central storage at electronic speed rather than at the speed of the cartridge drive.

Our conversion plan calls for us to convert our internal ISD systems to the cartridges first.



This will allow us to become acquainted with the drives without impacting our users. We will also be able to work out any kinks with new tape handling procedures during this time. As we become more familiar with the 3490s, we will begin to convert some of our larger tape users to the new drives.

One of the larger tasks we have in converting to the cartridge drives is logistical. We have to free up space in the computer room by freeing up 3420 tape reels and drives to make room for the 3490 drives and cartridges. This is the major reason we can't make the new tape cartridges available to everyone right away.

Soon after the start of the new fiscal year we plan to make the cartridge drives available to all our users. By this time we will have enough cartridge drives and scratch cartridges to handle the demand for them.

ISD will provide you with the information and assistance you need to use the new tape cartridges. It's mainly a matter of changing a UNITNAME is your JCL. This will be even easier for those applications which catalog their tape datasets.

--Joe Beausoleil, Technical Services

### *Catalog Your Tape Datasets*

If your applications use tape datasets we **STRONGLY** encourage you to catalog them. This takes a little more effort up front, but the benefits to be gained by cataloging your tape datasets far outweigh the one time effort to set it up. The additional effort will usually involve defining a Generation Data Group (GDG) for the tape datasets. ISD's Application Services section and the End User Computing section can assist you in this effort if you need help.

Those of you who already catalog your tape datasets should be able to convert to using the new cartridge tapes with a simple one time change to the UNITNAME parameter in your JCL. If you do not catalog your tape datasets, we **STRONGLY** encourage you to begin cataloging them as part of the conversion to the new cartridge tapes.

--Joe Beausoleil, Technical Services

### *Coding the Output Box Number*

It is very important to code your output box number on the job statement of all jobs that are printed at the data center. This box number provides vital information to those responsible for distributing the output. Most users have grown accustomed to coding this box number but many times it is coded incorrectly. Coding this box number correctly has become more critical since the printer default has been changed to the laser printer. This is because the banner page used for laser output is different than that used for the impact printer. To be useful, this box number must be coded as a two digit field and it must be in positions 6 and 7 of the programmer name field. Do not add additional information such as the word "BOX". Below is a sample job statement which shows the correct way to code this box number.

```
//CX0001ZZ JOB (01234,PS),0001.99.JOE.  
// BLOW,CLASS=B,MSGCLASS=A
```

Coding this box number correctly will help assure that your output will be routed promptly and accurately. If you have questions about how to code this box number, please call Dave Smith at 444-2860.

### *Misleading Error Message on Laser Printer*

Output printed on the mainframe laser printers may be followed by informational and/or error messages. The context of one of these messages is very misleading. This message appears as follows:

```
APS858I  SYSTEM ACTION TAKEN: PSF TERMINATED THE  
          PAGE IN ERROR AND CONTINUES TO PROCESS  
          THE DATA SET STARTING WITH THE NEXT  
          PAGE.
```

This message leads one to believe that the page where the error occurred was not printed. However, that is not the case. All pages of the output data set are printed as normal. If you have questions about this or other messages on your laser output, you may call Jan Lewis at 444-2901 or Mick Plovanic at 444-2571.

--Dave Smith, Production Services

## *CL/SuperSession*

If you use several different mainframe applications and would like to be able to use them concurrently and jump between them easily, SuperSession is the tool to use. CL/SS is a multi-session manager which allows computer users to access more than one mainframe application (TSO, CICS, IDMS, etc) at the same time through the use of virtual terminals. Many agencies are already using CL/SS and find it helpful in increasing their productivity. ISD is planning to convert existing terminals to CL/SS in the upcoming months. If you have any questions or concerns, contact Jerry Kozak at 444-2907, or Irv Vavruska at 444-2858, both from EUC. To request training for CL/SS, please contact Lois Lebahn, at 444-3987.

## *Online MVS Reference Information*

The State of Montana has purchased MVS/QUICK-REF from Chicago Soft, Inc. This product is designed for anyone who processes batch jobs on the state mainframe computer. MVS/QUICK-REF contains summary information on a wide range of topics. Included is information on Error Messages, Abend Codes, Programming Languages, IBM Utilities, JCL, SYNCSORT, VTAM Printer Support (VPS), and a whole lot more.

You can display the MVS/QUICK-REF Main Menu from within ISPF by entering U.Q from the ISPF/PDF PRIMARY OPTION MENU, or by entering QW on the command line of any panel. Optionally, by entering QW TOPIC, where TOPIC is an error message or abend code, MVS/QUICK-REF will display the text for the topic you entered. But the fastest way to use MVS/QUICK-REF is to define a MVS/QUICK-REF command to one of your PFKEYS. Then just move the cursor to the error message or abend code and press the PFKEY. MVS/QUICK-REF will display the text for the statement at the cursor location.

To find out more about MVS/QUICK-REF enter QW README on any command line in ISPF. README contains information on setting up PFKEYS for invoking the quick lookup facility, searching the quick reference database, and printing information contained in MVS/QUICK-REF. You can also access the MVS/QUICK-REF help tutorial by pressing you HELP

PFKEY when you are in any of the MVS/QUICK-REF screens.

Question or comments on MVS/QUICK-REF contact Glen Stroop in the Application Support Section at ext. 2910 or Denny Knapp in the End User Computing Section at ext. 2072.

## *Techtalk*

### *ISD Announces Support for 1-2-3 Release 3.4*

ISD is announcing full support for 1-2-3 Release 3.4. ISD is also offering full product support for 1-2-3 Releases 2.3, 2.4, 3.1, and 3.1+ as well as 1-2-3 for Windows 1.1 with SmartPak.

The most important improvement in Release 3.4 is the increase in speed in recalculating large and complex worksheets. ISD found that the startup time to load 1-2-3 Release 3.4 and Wysiwyg took about twice as long to load than Release 3.1, however all recalculations, macros, loading files, and erasing files from memory were much faster. The increase in speed for many of these functions were between one and ten seconds quicker which in turn corresponds to a 17% to 42% increase in speed. The most noticeable differences were found when running macros or doing recalculations which take several minutes to perform. Again, Release 3.4 outperformed Release 3.1 by saving 6 minutes or decreasing the amount of time to run the macro by 45%. PC Magazine has found the recalc times to be, on average, 22% shorter than those of Release 3.1+ and less than 1% longer than those of Release 2.4 when Release 2.4 was using expanded memory.

Added to Release 3.4 are three-dimensional line, bar, pie, and area types, where each data series is plotted in a separate plane. Other graphing enhancements include the ability to suppress any portion of the graph frame and the option to display chart data as a table beneath the graph.

The DEL key now deletes the cell entry which is highlighted (similar to /Range Erase). Dragging with the mouse now selects cell ranges -- you no longer need to press F4 before dragging.



Landscape printing is available for dot matrix printers. Trace mode when debugging macros now displays the address and contents of the current macro cell. A new command-line switch (-W) lets you run 1-2-3 with a particular worksheet coming up automatically after starting 1-2-3. New optional settings sheets also help you keep track of printing, graphing, and global default options.

The most visible enhancement most users will see when they run Release 3.4 is the SmartIcon palette located on the right side of the screen. This SmartIcon palette is very handy when performing routine tasks since you can assign various tasks to each icon. There are many built-in icons, but the icon palette is also able to be customized so each user can display the icons they want, and can assign their own tasks to their own icons.

ISD recommends that users who are currently using Release 2.x and who need 3-dimensional spreadsheets upgrade to Release 3.4 (rather than Release 3.1 or 3.1+). If you do not need 3-dimensional spreadsheets, ISD recommends that you stay with Release 2.x. If you are already using Release 3.1 or 3.1+, and need to take advantage of the increased performance in speed, or wish to use any of the other new features, that you upgrade to Release 3.4. Release 3.4 is very usable and much quicker than Release 3.1 or 3.1+.

The upgrade price for updating from any release through Central Stores is approximately \$100.00.

If you have any questions on Lotus 1-2-3, please call Irv Vavruska at 444-2858 or Jerry Kozak at 444-2907, both from End User Computing.

## ***WordPerfect 5.1 Columns***

When creating a newsletter, inventory list, or any text that flows into columns, use WordPerfect's Columns feature to create newspaper or parallel columns.

Before you define your columns, Press Format (**Shift+F8**), select Line (1) and change Hyphenation (1) to Yes and Justification (3) to Full.

A. **NEWSPAPER COLUMNS** - Designed for a document such as a newsletter or magazine article where text flows continuously up and down through columns on a page.

B. Place the cursor where you want the columns to begin

1. Press Columns/Table (**Alt+F7**)

a. Select Columns (1)

b. Select Define (3)

2. Default Type is Newspaper

3. Change Number of columns as appropriate

4. Press Exit (**F7**) to return to the Column menu

5. Turn Columns On by

a. Selecting On (1)

6. To turn the Columns Off in the middle of the document,

a. Press Columns/Table (**Alt+F7**)

b. Select Columns (1)

c. Select Off (2)

C. **PARALLEL COLUMNS** - Designed for documents such as inventory lists where information moves across the columns. Each time you want to begin a new column, press **Ctrl+Enter** (Hard Page Break).

1. Follow the instructions for Newspaper Columns above. The only difference is for type of columns, select Parallel (2), or Parallel with Block Protect (3).

2. Parallel (without Block Protect) - A single parallel column can be longer than one page.

3. Parallel with Block Protect - Protects a block of text in a column from being split by a soft page break.

- a. If a set of columns is longer than a page, Block Protect is ended and the text spills over into the same column on the next page.

#### D. EDITING THE COLUMNS

##### 1. Cursor Movement

- a. Use the cursor control keys to move within the columns as you would with any WordPerfect document.

##### 2. Special Cursor Movement Between the Columns

- a. **Go to (Ctrl+Home)**, and the **Left Arrow** -- moves the cursor one column to the left
- b. **Go to (Ctrl+Home)**, and the **Right Arrow** -- moves the cursor one column to the right
- c. **Go to (Ctrl+Home)**, **Home** and the **Left Arrow** -- moves the cursor to the first column
- d. **Go to (Ctrl+Home)**, **Home**, and the **Right Arrow** -- moves the cursor to the last column
- e. If you are at the bottom of the column, press the **Right Arrow** key to move quickly to the top of the next column
- f. If you are at the top of a column, press the **Left Arrow** to move quickly to the bottom of the previous column.

3. To delete text inside columns use the normal WordPerfect deletion key strokes. For example, to Delete To End of Line use **(Ctrl+End)**. Likewise to Delete to End of Page use **(Ctrl+PgDn)** this will delete the text to the bottom of the column.

#### E. COLUMN EDITING PRECAUTIONS

1. You can use Move **(Alt+F4)** within a column to cut or copy text. After blocking the desired text press Move

**(Alt+F4)**, select **Block (1)**, then **Move (1)** or **Copy (2)**. When using move with Newspaper columns, do not select **Tabular Column (2)** to move the text, or the columns cannot be retrieved correctly.

2. The following features do not work with columns on. Your cursor cannot be between the **[COL ON]** and **[COL OFF]** codes.

- a. Left/Right Margins. However, Top/Bottom margins work fine.
- b. Footnotes
- c. Endnotes
- d. Column Definitions
- e. Sorting - Only works on newspaper style columns and using paragraph type sort.

If you have any questions concerning WordPerfect Columns, or any WordPerfect related questions please call Kyle Wynn 444-2859 or Sue Skuletich 444-1392 both of End User Computing.

#### *Windows Screen Saver on Demand*

The WINDOWS screen saver keeps images from being "burned" into the screen phosphors in your monitor, and the password option on the screen saver prevents unwanted access to your system. One problem with the screen saver is that it activates itself only after a lack of keyboard or mouse input for a set amount of time. It would be convenient to be able to activate the screen saver and password on demand, so that if you need to leave the office your session is secure. Following is an explanation of how to set up your WINDOWS screen saver so that it can be activated immediately by a "short-cut" keystroke or by clicking an icon.

1. Make sure you have the password option on the screen saver setup panel checked, and you have your password chosen. (Click on **SET PASSWORD**, and enter a password).
2. Once you have your password set you need to edit your WIN.INI file. First, **SAVE A BACKUP COPY OF YOUR WIN.INI**



FILE. In WIN.INI find the line that begins with PROGRAMS=. This will be in the [WINDOWS] section. Add the extension SCR to the extensions already listed on that line.

3. Save the changes made to WIN.INI and re-start WINDOWS.
4. Once you have restarted WINDOWS open the program group that you want to create a screen saver icon in (i.e. main or applications).
5. Choose NEW.. from the FILE menu in Program Manager.
6. Click on PROGRAM ITEM, then click on OK.
7. Enter a Description, such as SCREEN SAVER.
8. In the COMMAND LINE section type the filename of the screen saver you want to run, followed by a space followed by /S. For example, SSSTARS.SCR /S

The default screen savers and their associated filenames are:

SSFLYWIN.SCR - Flying Windows  
SSMARQUE.SCR - Marquee  
SSMYST.SCR - Mystify  
SSSTARS.SCR - Starfield Simulation

9. In the SHORTCUT KEY box the word NONE will appear. Tab the cursor to the shortcut key box, and press the letter you want to use in combination with CTRL and ALT to activate the screen saver. For instance if you enter S in the shortcut key box, CTRL ALT S will active your screen saver.
10. Click on OK or YES until you return to Program Manager.
11. You can now start your screen saver immediately by either double-clicking on the icon you created, or by pressing the shortcut key combination that you selected (CTRL ALT S in the example above).

\*\*\* Note that the screen saver and password still operate as usual in addition to the immediate method you have now set up.

If you have any questions about this article, or about Windows in general, contact Denny Knapp, End User Computing, 444-2072.

## *ISD Graphics Support*

ISD is announcing full support for Freelance for Windows Release 2.0 and limited support for CorelDraw 3.0. If you are using a DOS version of Freelance, ISD still is providing full support for Freelance Release 3.01. If you have any interests in attending conversion or training classes for these products please call Lois Lebahn at 444-3987.

Freelance and CorelDraw for Windows are easy-to-use, fully compliant Windows applications that leverage the Windows graphical user interface and environment. This includes Windows pull-down menus, sizable windows and mini menu rollups, mouse support, icons, help system, memory management, font/color system, output and screen device support, Dynamic Data Exchange (DDE), Object Linking and Embedding (OLE) and clipboard support. Further, the products are entirely consistent with other Windows applications. They provides compatibility with all prior versions of Freelance, and gives users access to powerful graphic technologies. Freelance for Windows offers users complete and easy publishing and presentation abilities for the novice and CorelDraw for the experienced user offers a host of unique illustration features.

Dynamic Data Exchange (DDE) lets you transfer data between your graphic presentation and other Windows applications (Word processor, Spreadsheet, etc) and update the information in the destination file when information in the source file changes. Object Linking and Embedding allows you to link objects located in another file into your current presentation. Both packages provide presentation backgrounds to assist one in creating a slide show. Freelance provides Smartmasters which guide you in the placement of your text. It also has an outline view which lets you create your slide show on the fly. For the experienced user CorelDraw offers more dramatic illustration abilities such as, object extrusion, blending, gradient fill and a whole lot more.

Freelance for Windows is compatible with existing DRW files from all DOS releases. Using

Freelance for Windows, you can open files from those releases and save them in the new PRE format or export them to the DOS DRW format. CorelDraw does not directly support the DRW format. Files must first be converted/exported to a CGM format for import into CorelDraw.

ISD will start offering training for Freelance and CorelDraw for Windows soon. Watch future News & Views publications for dates and times. If you have any question concerning the use of Freelance for Windows or CorelDraw for Windows, please call Jerry Kozak at 444-2907 or Irv Vavruska at 444-2858, both from End User Computing.

### *Calendar of Events*

April 14 - Data Processing Manager's Group (DPMG) meeting.

## *End Notes*

### *Submit Articles*

If you wish to submit an article to *News and Views* for publication, the following schedule provides dates that articles must be received by in order to be included in the issues listed below:

|            |          |
|------------|----------|
| May Issue  | 04/09/93 |
| June Issue | 05/07/93 |
| July Issue | 06/04/93 |

### *ISD Network Assistance Center 444-2000*

Have a problem? Need ISD assistance or support for any of your information processing needs--either voice or data? The central contact point is the ISD Network Assistance Center.

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Editors: Dan Mossman & Brett Boutin



# Training Information

All classes will be held in the Training Room in the basement of the Teachers Retirement Building at 1500 6th Ave., unless another location is specified. There is a limit of 12 participants per paid class and 20 participants per demonstration (free) class, unless otherwise announced. The cost of classes is shown below. Please note that these costs are subject to change each July 1st.

To enroll in a class, **you must send an enrollment application** to the Department of Administration, ISD, Application Services Bureau, Mitchell Building, Helena, MT 59620-0113. If you have questions about enrollment, please call 444-3987. *Once you enroll in a class, the full fee will be charged UNLESS you cancel at least three business days before the first day of class.*

The classes available and their costs are as follows:

| <u>Class Name</u>  | <u>Cost</u> | <u>Length<br/>in Days</u> |
|--|-------------|---------------------------|
| *MVS\ESA - Differences from MVS\XA                       | FREE        | ¼                         |
| *Introduction to TSO/SPF                                 | \$ 80.00    | 1                         |
| *Introduction to JCL (Job Control Language)              | 320.00      | 4                         |
| *Introduction to CICS Programming                        | **          | 5                         |
| *Introduction to IDMS Database Programming               | **          | 5                         |
| *IDMS ADS/Online   | **          | 5                         |
| *Introduction to CULPRIT                                 | 240.00      | 3                         |
| *Subscribing in CULPRIT                                  | FREE        | ¼                         |
| *CULPRIT Programming for IDMS                            | 160.00      | 2                         |
| *Introduction to SAS: Module 1                           | 20.00       | ¼                         |
| Module 2   | 20.00       | ¼                         |
| Module 3   | 200.00      | 2½                        |
| *Novell Network Administration                           | 160.00      | 2                         |
| *Novell NetWare System Manager                           | **          | 3                         |
| *Novell NetWare Advanced System Manager                  | **          | 3                         |
| *Novell Netware Service & Support                        | **          | 5                         |
| *PC Memory Management Options and Considerations         | FREE        | ¼                         |
| *Windows Purchase, Installation and Use Considerations   | FREE        | ¼                         |
| *Windows for the Technical Support Team                  | **          | 2                         |
| Beginning Microcomputer Skills                           | 80.00       | 1                         |
| Fundamentals of DOS                                      | 80.00       | 1                         |
| *Intermediate DOS  | 80.00       | 1                         |
| *Introduction to Novell Networks                         | 40.00       | ½                         |
| *Introduction to Windows                                 | 80.00       | 1                         |
| CorelDraw  |             |                           |
| CA-Docview   |             |                           |
| Introduction to Quickref                                 |             |                           |
| Introduction to WordPerfect (5.0 or 5.1)                 | 120.00      | 1½                        |
| *Advanced Features of WordPerfect 5.0                    | 120.00      | 1½                        |
| WordPerfect (5.0 or 5.1) Complex Document Functions      | 40.00       | ½                         |
| More WordPerfect (5.0 or 5.1) Complex Document Functions | 40.00       | ½                         |
| *WordPerfect 5.1 Tables                                  | 40.00       | ½                         |
| *WordPerfect 5.1 Columns and Math Functions              | 40.00       | ½                         |
| *WordPerfect 5.1 Graphics                                | 80.00       | 1                         |
| *WordPerfect Merge and Sort Functions                    | 40.00       | ½                         |

|   |        |       |
|---|--------|-------|
| *WordPerfect 5.1 Macros                               | 80.00  | 1     |
| *WordPerfect 5.1 Tips and Tricks                      | FREE   | 1/4   |
| *Conversion from WordPerfect 5.0 to 5.1               | FREE   | 1/4   |
| *Spreadsheet Design and Documentation                 | 80.00  | 1     |
| *Conversion from Lotus 1-2-3 Rel. 2.2 to Rel. 3.1     | FREE   | 1/4   |
| Introduction to Lotus 1-2-3, (Release 2.3 or 3.1)     | 160.00 | 2     |
| Intermediate Lotus 1-2-3, (Release 2.3 or 3.1)        | 80.00  | 1     |
| Lotus 1-2-3 WYSIWYG Features (Release 2.3 or 3.1)     | 40.00  | 1/2   |
| *Lotus 1-2-3 Graphics (Release 2.3 or 3.1)            | 40.00  | 1/2   |
| *Lotus 1-2-3, Release 3.1, 3-Dimensional Spreadsheets | 40.00  | 1/2   |
| *Lotus 1-2-3 Printing (Release 2.3 or 3.1)            | 40.00  | 1/2   |
| Lotus 1-2-3 for Windows                               | FREE   | 1/4   |
| Freelance for Windows                                 | 80.00  | 1     |
| Freelance for Windows - CONVERSION                    | FREE   | 1/4   |
| Lotus 1-2-3 Macros (Release 2.2, 2.3, or 3.1)         | 160.00 | 2     |
| *Introduction to Lotus 1-2-3 Database Features        | 160.00 | 2     |
| Introduction to PFS:Professional File, Ver. 2.0       | 80.00  | 1     |
| Micro Database Concepts and Design                    | 80.00  | 1     |
| Introduction to R:Base, Release 3.1                   | 200.00 | 2 1/2 |
| *Advanced R:Base Release 3.1                          | 160.00 | 2     |
| *R:Base Query and Reports (Rel. 3.1)                  | 80.00  | 1     |
| *R:Base Views (Rel. 3.1)                              | FREE   | 1/4   |
| *Intermediate R:Base (Rel. 3.1)                       | 160.00 | 2     |
| State Telephone Training                              | FREE   | 1/4   |
| *Orientation to State's Computer Center               | FREE   | 1/4   |
| Introduction to IBM's Library Reader                  | FREE   | 1/4   |

\* This class is not scheduled during the time covered in this issue.



# Training Calendar

## Data Network/Mainframe Classes

|         |                                    |
|---------|------------------------------------|
| Apr. 20 | Introduction to IBM Library Reader |
| May 12  | Introduction to IBM Library Reader |
| June 10 | Introduction to IBM Library Reader |

## Microcomputer Classes

|              |   |
|--------------|---|
| Apr. 12      | Fundamentals of DOS                             |
| May 20       | Introduction to PFS:Professional File, Ver. 2.0 |
| May 26       | CorelDraw                                       |
| June 3 a.m.  | CA-Docview                                      |
| June 7       | Fundamentals of DOS                             |
| June 11 a.m. | Introduction to Quickref                        |
| June 21      | Beginning Microcomputer Skills                  |

## Word Processing Classes

|                       |   |
|-----------------------|---|
| Apr. 19, Apr. 20 a.m. | Introduction to WordPerfect (5.0 or 5.1)    |
| Apr. 28 a.m.          | WordPerfect Complex Document Functions      |
| Apr. 28 p.m.          | More WordPerfect Complex Document Functions |
| May 3, May 4 a.m.     | Introduction to WordPerfect (5.0 or 5.1)    |
| June 28, June 29 a.m. | Introduction to WordPerfect (5.0 or 5.1)    |

## Spreadsheet Classes

|                  |   |
|------------------|---|
| Apr. 1 & 2       | Lotus Macros                                      |
| Apr. 29 & 30     | Introduction to Lotus 1-2-3 (Release 2.3 or 3.1)  |
| May 5 a.m.       | Lotus 1-2-3 WYSIWYG Features (Release 2.3 or 3.1) |
| May 10 & 11      | Introduction to Lotus 1-2-3 (Release 2.3 or 3.1)  |
| May 13           | Intermediate Lotus 1-2-3 (Release 2.3 or 3.1)     |
| May 17           | Lotus 1-2-3 for Windows Conversion                |
| June 8 a.m.      | Freelance for Windows Conversion                  |
| June 14, June 15 | Introduction to Lotus 1-2-3 (Release 2.3 or 3.1)  |
| June 17 a.m.     | Lotus 1-2-3 for Windows Conversion                |
| June 23          | Freelance for Windows                             |

## Database Classes

|                        |                                  |
|------------------------|----------------------------------|
| Apr. 5                 | Micro Database Concepts & Design |
| Apr. 6, 7, Apr. 8 a.m. | Introduction to R:Base           |

## Communication Classes

|            |                               |
|------------|-------------------------------|
| May 5 p.m. | State Telephone User Training |
|------------|-------------------------------|

## *Data Network/Mainframe Classes*

**INTRODUCTION TO I.B.M.'s LIBRARY READER:** presented by Denny Knapp of the Application Services Bureau

**DATES &** April 20, 1993 1:00 p.m. to 3:00 p.m.  
**TIME:** May 12, 1993 9:00 a.m. to 11:00 a.m.  
June 10, 1993 1:00 p.m. to 3:00 p.m.

**PREREQUISITE:** None

**LOCATION:** Basement of the Teachers Retirement Bldg. at 1500 6th Ave.

This free class will provide an introduction to the I.B.M. Online Library Reader software soon to be made available on the State personal computer network. Library Reader provides the ability to access, on-line from your workstation, the I.B.M. mainframe hardware and software manuals. This will greatly reduce the need for hard copy mainframe manuals. Library Reader provides several advanced capabilities such as indexed or approximate searches, hypertext linking, logical grouping of manuals into "bookshelves", user entered "margin notes", and much, much more. This session will have some hands-on work so class sizes will be limited.

**INTRODUCTION TO CA-DOCVIEW:** presented by the staff of the Application Services Bureau

**DATE:** June 4, 1993  
**TIME:** 9:00 a.m. to 11:00 a.m.  
**PREREQUISITE:** Working knowledge of TSO/SPF  
**LOCATION:** Basement of the Teachers Retirement Bldg. at 1500 6th Ave.

This class is designed to introduce the CA-DOCVIEW system to mainframe users. CA-DOCVIEW contains reference information on products supplied by Computer Associates, such as IDMS, Tape Management System, and ACF2. CA-DOCVIEW is available to mainframe users from the U option of ISPF. CA-DOCVIEW provides online access to information normally available only in hard-copy manuals. Participants will go through the fundamentals of using CA-DOCVIEW in a real-time, hands-on session.

**INTRODUCTION TO QUICK-REF:** presented by the staff of the Application Services Bureau

**DATE:** June 11, 1993  
**TIME:** 9:00 a.m. to 11:00 a.m.  
**PREREQUISITE:** Working knowledge of TSO/SPF  
**LOCATION:** Basement of the Teachers Retirement Bldg. at 1500 6th Ave.

This class is designed to introduce the QUICK-REF system to mainframe users. QUICK-REF is a "pop-up" quick reference tool for ISPF users. It provides rapid access to a variety of reference information, without forcing the ISPF user to interrupt their current session. The type of information provided includes, but is not limited to, the following: MVS JCL syntax, Assembler Language syntax, MVS messages and codes, TSO command syntax, MVS reference summary, TSO Clist syntax, VTAM messages, JES2 syntax, DASD free space info, CICS messages and codes, COBOL syntax, and various independent software vendors messages. Participants will go through the fundamentals of using QUICK-REF in a real-time, hands-on session.



## *Microcomputer Classes*

### **BEGINNING MICROCOMPUTER SKILLS:**

**DATE:** June 21, 1993  
**TIME:** 8:30 a.m. to 3:30 p.m.  
**PREREQUISITE:** None  
**LOCATION:** Basement of the Teachers Retirement Bldg. at 1500 6th Ave.

This course will give participants brief hands-on experience with microcomputers. The following topics will be covered:

- The Machine
- The Operating System
- Word Processing
- Spreadsheets and Graphics
- File Management
- Communications

Most class time will be spent using microcomputers and software. This course helps develop a positive attitude toward using microcomputers and teaches their basic functions. This class--or its equivalent--is a prerequisite for our other microcomputer courses.

### **FUNDAMENTALS OF DOS:**

**DATE:** April 12, 1993  
June 7, 1993  
**TIME:** 8:30 a.m. to 3:30 p.m.  
**PREREQUISITE:** Beginning Microcomputer Skills  
**LOCATION:** Basement of the Teachers Retirement Bldg. at 1500 6th Ave.

"Fundamentals of DOS" is intended for microcomputer users who need to know more about controlling the microcomputer through its operating system. Programming experience is NOT required. Topics to be covered include:

- What is DOS? Why is it necessary to know about it?
- DOS names for peripherals
- File naming
- Set-up files such as CONFIG.SYS
- Internal DOS commands - DIR, ERASE, RENAME, TYPE, COPY and their variations
- External commands - FORMAT, SYS, DISKCOPY, CHKDSK, MODE
- Interpreting batch files
- Backup procedures

**INTRODUCTION TO PFS:PROFESSIONAL FILE, VERSION 2.0:** presented by Irvin Vavruska of the Application Services Bureau

**DATE:** May 20, 1993  
**TIME:** 8:30 am to 4:30 pm  
**PREREQUISITE:** Beginning Microcomputer Skills  
**LOCATION:** Basement of the Teachers Retirement Bldg. at 1500 6th Ave.

The PFS:Professional File software is an easy-to-use file management system. This course will give participants hands-on experience creating databases--demonstrating the flexibility of this software in storing, retrieving, and updating a large amount of related information.

**FREELANCE GRAPHICS FOR WINDOWS CONVERSION:** presented by the staff of the Application Services Bureau

**DATE:** May 26, 1993  
**TIME:** 8:30 a.m. to 4:30 p.m.  
**PREREQUISITE:**  
**LOCATION:** Basement of the Teachers Retirement Bldg. at 1500 6th Ave.

This class will introduce users to Freelance for Windows. Students will obtain information regarding its features, abilities, and procedures for converting Freelance for Dos files.

**FREELANCE GRAPHICS FOR WINDOWS** presented by the staff of the Application Services Bureau

**DATE:** June 23, 1993  
**TIME:** 8:30 am to 4:30 pm  
**PREREQUISITE:** Beginning Microcomputer Skills  
**LOCATION:** Basement of the Teachers Retirement Bldg. at 1500 6th Ave.

This class will give participants hands-on experience using Freelance for Windows to create many types of figures, drawings, graphs and screen shows. Students will learn to use Freelance's symbol library and freehand drawing capabilities and to link data from Lotus 1-2-3 spreadsheets to create a publication-quality chart or graph.

**CORELDRAW 3.0 FOR WINDOWS:** presented by staff of the Application Services Bureau

**DATE:** May 26, 1993  
**TIME:** 8:30 a.m. to 4:30 p.m.  
**PREREQUISITE:** Familiarity with DOS and Windows  
**LOCATION:** Basement of the Teachers Retirement Bldg. at 1500 6th Ave.

This class will give new users an overview of CorelDraw its features and abilities. CorelDraw is made up of six components: CorelPHOTO-PAINT, CorelMOSAIC, CorelTRACE, CorelDRAW, Corel-CHART, and CorelSHOW. Students will learn to create and edit graphic figures, boxes, lines, charts and photographic images through hands on exercise. These abilities will then be combined to produce a basic slide show. This course is tailored for the beginning windows graphic user. Additional and more advanced classes will be scheduled for each component of the Corel system.

### *Word Processing Classes*

**INTRODUCTION TO WORDPERFECT:**

**DATES:** April 19 and 20, 1993  
May 3 and 4, 1993  
June 28 and 29, 1993  
**TIMES:** 8:30 a.m. to 3:30 p.m. on first day  
8:30 a.m. to noon on second day  
**PREREQUISITE:** Beginning Microcomputer Skills or equivalent  
**LOCATION:** Basement of the Teachers Retirement Bldg. at 1500 6th Ave.



This class is a generic introduction to WordPerfect for new users of release 5.0 or 5.1. Experience with WordPerfect is not necessary. Participants will go through the fundamentals of creating, formatting, editing and printing documents. Some advanced features will also be covered, including checking spelling, finding a word or phrase, marking blocks of text, moving text and listing/retrieving document files.

#### **WORDPERFECT MERGE AND SORT FUNCTIONS:**

**DATE:** March 31, 1993  
**TIME:** 8:30 a.m. to noon  
**PREREQUISITE:** Introduction to WordPerfect 5.0 or 5.1  
**LOCATION:** Basement of the Teachers Retirement Bldg. at 1500 6th Ave.

This class will cover the file merge and sort features of WordPerfect. Students currently using WordPerfect 5.0 or 5.1 will have hands-on practice with the steps needed to generate files sorted in a variety of ways. They will also learn to merge primary and secondary files for mass mailings, for example, and to set up files for keyboard merges.

#### **WORDPERFECT COMPLEX DOCUMENT FUNCTIONS:** presented by staff of the Computer School

**DATES:** April 28, 1993  
**TIME:** 8:30 a.m. to noon  
**PREREQUISITE:** Introduction to WordPerfect 5.0 or 5.1  
**LOCATION:** Basement of the Teachers Retirement Bldg. at 1500 6th Ave.

This class will cover Master and Subdocument design as well as creation of tables of contents. Using WordPerfect's Master Document feature allows creation of larger or more complex documents while providing more manageable and editable documents. Examples are reports containing multiple chapters or requiring tables of contents, lists of figures and tables, outlines, headers and/or footers. Students currently using WordPerfect 5.0 or 5.1 will learn WordPerfect features that make it easy to generate tables of contents, lists and outlines and to combine subdocuments into a complex master document. Students will learn how to build, edit and expand a master document that includes lists of the document's contents.

#### **MORE WORDPERFECT COMPLEX DOCUMENT FUNCTIONS--FONTS, STYLES AND LISTS:** presented by staff of the Computer School

**DATE:** April 28, 1993  
**TIME:** 1:00 p.m. to 4:30 p.m.  
**PREREQUISITE:** WordPerfect (5.0 or 5.1) Complex Document Functions  
**LOCATION:** Basement of the Teachers Retirement Bldg. at 1500 6th Ave.

This class will expand upon the concepts covered in the prerequisite class. Persons currently using WordPerfect 5.0 or 5.1 will learn WordPerfect features that they can use to create a variety of reports and other complex documents. Students will learn to incorporate lists of tables and figures, headers and footers, footnotes or endnotes, and cross-referencing into the Master and Subdocument design. The class will also cover the use of Style, Font, Text In/Out, Graphics and Compose functions for document design and layout. This class will be taught using WordPerfect 5.1, but concepts and functions covered are available in WordPerfect 5.0.

## *Spreadsheet Classes*

### **INTRODUCTION TO LOTUS 1-2-3, RELEASE 2.3 OR 3:**

**DATES:** April 29 & 30, 1993  
May 10 & 11, 1993  
June 14 & 15, 1993  
**TIMES:** 8:30 a.m. to 4:30 p.m. each day  
**PREREQUISITE:** Beginning Microcomputer Skills  
**LOCATION:** Basement of the Teachers Retirement Bldg. at 1500 6th Ave.

This class is a generic introduction to Lotus 1-2-3 for persons with little or no Lotus experience. It will consist of instructions and hands-on practice, with lab time available for building spreadsheets of the participants' choosing.

The class will cover design, creation, printing and editing of spreadsheets. Additional topics will include selected graphic features, the use of formulae to connect spreadsheets, and the opening of multiple files at the same time. Students will learn about new WYSIWYG (What You See Is What You Get) features of Releases 2.3 and 3.1 such as enhanced printing of spreadsheets and graphs.

### **LOTUS 1-2-3 WYSIWYG FEATURES:**

**DATE:** May 5, 1993  
**TIME:** 8:30 a.m. to noon  
**PREREQUISITE:** Introduction to Lotus 1-2-3  
**LOCATION:** Basement of the Teachers Retirement Bldg. at 1500 6th Ave.

This course is intended for users of Release 2.3, 3.1 or 3.1+ who are already using Lotus 1-2-3 to create spreadsheets. It introduces students to the WYSIWYG (What You See Is What You Get) features of Lotus 1-2-3. The class consists of lecture and hands-on practice with the following features:

- Format--fonts, boldface, italics, underline, shadow, and outline
- Text--ranges, alignment, edit
- Screen display, zoom and customization
- Graphics within a worksheet--adding, enhancing, changing size or location
- Page layout
- Previewing and printing
- Advanced WYSIWYG features

### **INTERMEDIATE LOTUS 1-2-3, RELEASE 2.3 OR 3.1:** presented by the staff of The Computer School

**DATE:** May 13, 1993  
**TIME:** 8:30 a.m. to 4:30 p.m.  
**PREREQUISITE:** Introduction to Lotus 1-2-3  
**LOCATION:** Basement of the Teachers Retirement Bldg. at 1500 6th Ave.

This course is intended for users of Release 2.3, 3.1 or 3.1+. It covers intermediate features of Lotus 1-2-3 for those who are familiar with Lotus basics. It consists of instructions and hands-on practice, with lab time available for building spreadsheets of the students' choosing.



The following topics will be presented:

- @ functions
- Date and time formats and functions
- Ranges--naming, hiding and protecting ranges; using range commands
- Global defaults
- Titles, windows and text editing

Time permitting, the following topics will be covered with some hands-on practice:

- Selected file functions and file linking
- Magellan Viewer Addin (available in Releases 2.3 and 3.1+ only)
- Auditor Addin (available in Releases 2.3 and 3.1+ only)

**CONVERSION TO 1-2-3 FOR WINDOWS, RELEASE 1.1:** presented Irvin Vavruska of the Application Services Bureau

**DATE:** May 17, 1993  
June 17, 1993  
**TIME:** 9:00 a.m. to 11:00 a.m.  
**PREREQUISITE:** Lotus 1-2-3, knowledge of Windows is helpful  
**LOCATION:** Basement of the Teachers Retirement Bldg. at 1500 6th Ave.

This course is designed for anyone who has converted, or is planning to convert, to Lotus 1-2-3 for Windows Release 1.1. It consists of lecture and hands-on practice. The class covers features which are new to 1-2-3 for Windows as well as features which have changed from the DOS version. Some topics which will be discussed are Automatic Print Compression, Print Preview, 1-2-3 Classic menu, Graph Gallery, Solver and BackSolver, Dynamic Data Exchange (DDE), access to the Windows clipboard, greater flexibility in debugging macros, adding documentation to complex formulas, as well as worksheet and macro compatibility. SmartIcons and SmartPak options will also be discussed. These include AutoSum, SmartFill, SmartFormat, 3-D Sum, Centering Over Columns, and Zoom. Wysiwyg features which will be discussed include creating high quality reports by combining text, data, graphs, and styles, and enhancing graphs with drawing tools.

### *Database Classes*

**MICRO DATABASE CONCEPTS AND DESIGN:** presented by Denny Knapp of the Application Services Bureau

**DATE:** April 5, 1993  
**TIME:** 8:30 a.m. to 4:30 p.m.  
**PREREQUISITE:** Beginning Microcomputer Skills  
**LOCATION:** Basement of the Teachers Retirement Bldg. at 1500 6th Ave.

This class is designed to give participants a preliminary understanding of what a relational database is and how it compares to other products like Lotus 1-2-3 and PFS:Professional File. The class teaches database design techniques and is a prerequisite for other database classes offered by ISD.

**INTRODUCTION TO R:BASE, RELEASE 3.1:** Presented by the staff of The Computer School

**DATES:** April 6, 7, and 8, 1993  
**TIME3:** 8:30 a.m. to 4:30 p.m. on first and second days  
8:30 a.m. to noon on third day  
**PREREQUISITE:** Beginning Microcomputer Skills, Micro Database Concepts and Design and Fundamentals of DOS  
**LOCATION:** Basement of the Teachers Retirement Bldg. at 1500 6th Ave.

This class will give participants hands-on experience creating a database and developing a simple application with R:Base 3.1. The application will include database updates, queries, and simple form and report generation. The R:Base menu system will be used to develop the application. This class will not cover the R:Base command mode or programming other than menu system application development.

### *Communication Classes*

**STATE TELEPHONE USER TRAINING:** presented by the staff of the Telecommunications/Network Services Bureau

**DATE:** May 5, 1993  
**TIME:** 8:30 a.m. to noon  
**PREREQUISITE:** None  
**LOCATION:** Basement of the Teachers Retirement Bldg. at 1500 6th Ave.

This class is designed as an introductory or refresher course to familiarize employees with the features and use of the State telephone system. The different calling capabilities available and the dialing plan will also be discussed. This is an interactive class combining demonstrations with hands-on use of the features and the dialing plan.



*ISD CLASS ENROLLMENT APPLICATION*  
*COMPLETE THIS APPLICATION IN FULL AND*  
*RETURN IT TO ISD'S APPLICATION SERVICES BUREAU*  
*ONE WEEK PRIOR TO THE FIRST DAY OF CLASS*

COURSE DATA

Course Requested: \_\_\_\_\_

Date Offered: \_\_\_\_\_

STUDENT DATA

Name: \_\_\_\_\_

Soc. Sec. Number (for P/P/P): \_\_\_\_\_

Agency & Division: \_\_\_\_\_/\_\_\_\_\_

Mailing Address: \_\_\_\_\_

Phone: \_\_\_\_\_

How have you met the required prerequisites for this course? Explain, giving the class(es) taken, tutorial(s) completed, and/or experience.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

BILLING INFORMATION/AUTHORIZATION MANDATORY

ISD Billing Number (5 digits): \_\_\_\_\_

Authorized Signature: \_\_\_\_\_

FULL CLASS FEE WILL BE BILLED TO THE REGISTRANT UNLESS  
CANCELLATION IS MADE THREE BUSINESS DAYS BEFORE  
THE START DATE OF THE CLASS.

**SEND COMPLETED FORM TO:**

**ISD APPLICATION SERVICES BUREAU, DEPARTMENT OF ADMINISTRATION**

DEPARTMENT OF ADMINISTRATION  
INFORMATION SERVICES DIVISION  
ROOM 21, MITCHELL BLDG  
PO BOX 200113  
HELENA MT 59620-0113

HAROLD CHAMBERS  
MONTANA STATE LIBRARY  
REFERENCE & INFO SERVICES  
1515 E SIXTH  
HELENA MT 59620

DEADHEAD